International Civil Aviation Organization

AN-Conf/12-WP/84
15/10/12

WORKING PAPER

TWELFTH AIR NAVIGATION CONFERENCE

Montréal, 19 to 30 November 2012

Agenda Item 1: Strategic issues that address the challenge of integration, interoperability and harmonization of systems in support of the concept of "One Sky" for international civil aviation

1.1: Global Air Navigation Plan (GANP) – framework for global planning

f) Aeronautical information management (AIM) roadmap

CREATION OF AN AERONAUTICAL INFORMATION SYSTEM

(Presented by the Russian Federation)

EXECUTIVE SUMMARY

This paper presents materials about work done in the Russian Federation to create a system for managing the collection, transfer, processing, storage, and distribution of aeronautical information.

Action: The Conference is invited to note the materials and conclusions presented in this working paper.

1. INTRODUCTION

1.1 With the increase in the intensity of air traffic in the Russian airspace, in order to maintain the safety levels, regularity, and cost-effectiveness already achieved and improve these parameters in the future, consumers of aeronautical information such as airlines, aircraft crews, air traffic control services or flight planning units need aeronautical information (ANI) that is better and faster than that which suppliers can provide today.

2. BACKGROUND

2.1 As a result of structural changes and the separation of the business activities of Russian airlines, airports and their services, the functions of aeronautical information units at all levels have undergone fundamental changes which have given rise in a natural way to a series of disparate companies that process and provide aeronautical information.

2.1.1 At times, some of these companies, which are founded on various organizational and legal bases, do not have the necessary material and technical resources, are not fully staffed with qualified specialists, and only partially meet the challenges of providing aeronautical information to airspace users.

2.2 In order to streamline the activities of aeronautical information services in the Russian Federation, a series of actions in the areas of organization and production are being taken that include the

provision of funding aimed ultimately at the transition to a system for managing the transfer, processing, storage, and distribution of aeronautical information.

2.3 The above actions were taken keeping in mind the current state of the Russian aeronautical information service, existing ICAO Standards and Recommended Practices, rules and procedures of Eurocontrol, RTCA, and EUROCAE concerning aeronautical information, ICAO's general strategy for air navigation development, CNS/ATM implementation, and the use of paperless technology.

2.4 Russian industry has developed groups of automated aeronautical information systems using the Aeronautical Information Exchange Model AIXM, version 5.1, which operates at the aerodrome, regional, and federal levels. At the time of this development work, AIP, x-NOTAM and eTOD subsystems were also created.

2.5 The eAIP subsystem was created based on the Eurocontrol Specification for the Electronic Aeronautical Information Publication (eAIP), version 2.0 dated 14 February 2011, and the x-NOTAM subsystem was based on the Eurocontrol and FAA AIXM version 5.1. Digital NOTAM Event Specification - *Increment 1*- version 1.0 dated 8 June 2011. The eTOD subsystem was created using the Eurocontrol draft "Terrain and Obstacle Data Manual", version 1.0 dated 7 June 2010.

2.6 Thus all of this work was done using documentation lacking normative status. This year, work was begun on the further development of aeronautical information groups using service-oriented architecture (SOA) technologies to improve the quality, accuracy and relevance of air navigation data in the users' aviation systems and to increase the speed with which it is obtained.

2.6.1 The completion of this work will result in multiple benefits for airspace users, for example:

a) online access to relevant aeronautical information through the use of service-oriented architecture (SOA) and web technologies;

b) automated verification of the consistency and integrity of incoming data;

c) electronic collection of aeronautical information and digital NOTAM with aeronautical information displayed on a map; and

d) use of mechanisms to ensure integrity and traceability of authorship in data management.

2.7 Efforts to consistently introduce digital processing of air navigation data in Russian civil aviation are being coordinated with the use of mechanisms for the application of ASBU Modules B0-30, B1-30 and B1-31 and shall be taken into account in the development of aeronautical information groups.

3. CONCLUSION

3.1 The Russian Federation supports the implementation of ASBU Modules B0-30, B1-30 and B1-31 in the near- and medium-term.

3.2 The work done by the Russian Federation in the area of aeronautical information contributes to the gradual implementation of digital processing of air navigation data and the transition from AIS to AIM, which is consistent with the work envisioned by Module B0-30 and the subsequent transition to the implementation of Modules B1-30 and B1-31.

3.3 The Conference is invited to agree to the following recommendation:

Recommendation 1/x — Creation of an aeronautical information system

That the Conference request that ICAO expedite the process of assigning official status to the documents: Eurocontrol Specification for the Electronic Aeronautical Information Publication (eAIP), version 2.0 dated 14 February 2011, the Eurocontrol and FAA AIXM version 5.1. Digital NOTAM Event Specification - *Increment 1*- version 1.0 dated 8 June 2011 and the Eurocontrol draft "Terrain and Obstacle Data Manual", version 1.0 dated 7 June 2010.

— END —